



Surface roughness and runoff

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Soil surface conditions changes dynamically during a precipitation event. The changes involve compaction, aggregate detachment and of course transportation by runoff or drop erosion. Those processes together have an effect on the transport process of the soil particles and aggregates, and influences the roughness of the soil surface as well. How does surface roughness have an effect on the aggregate and particle size distribution of the sediment? How does the sediment connectivity change from precipitation event to precipitation event? Beside the previous questions on of the main aim of the present research is to apply rainfall simulators for the built-up of a complex approach, rather than to concentrate only on one of two factors. Hence four types of sample were collected during the simulation experiment sequences: 1) photos were taken about the surface before and after the rain, in order to build digital surface models; 2) all the runoff and eroded sediment was collected; 3) soil loss due to drop erosion was also sampled separately; and 4) undisturbed crust samples were collected for thin section analyses. Though the runoff ratio was smaller than what, the preliminary results suggest that the sediment connectivity covered bigger area on crusty surface, than on a rough one. These ambiguous data may be connected to the soil crust development.

J. A. Szabó wish to acknowledge the support of NTP-NFTÖ-16-0203.

G. Jakab wish to acknowledge the support of János Bolyai Fellowship.